

Docket Number: 081468-0307720
Client Reference: P-1503.020-US



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of

HANSEN

Group Art Unit: NOT ASSIGNED

Application No.: 10/773,397

Examiner: NOT ASSIGNED

Filed: February 9, 2004

Confirmation No.: NOT ASSIGNED

For: LITHOGRAPHIC APPARATUS AND METHOD FOR OPTIMIZING AN
ILLUMINATION SOURCE USING PHOTOLITHOGRAPHIC SIMULATIONS

May 10, 2004

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to 37 CFR 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. One copy of the Liebchen application and each article is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom. Applicants respectfully request the Examiner return an initialed copy of the enclosed Form PTO-1449 to Applicants with the next Office communication to indicate that the reference(s) has been considered, per MPEP § 609.

This Information Disclosure Statement is being filed before the mailing date of the first Office Action on the merits in the present application. No certification or fee is required.

This application is one of a series of related applications, identified in the attached Appendix, which are directed to related technical subject matter. The identification of those U.S. Patent Applications is not to be construed as a waiver of secrecy as to those applications now or upon issuance of the present application as a patent. The Examiner

HANSEN - 10/773,397
Docket No. 081468-0307720

is respectfully requested to consider the cited applications and the art cited therein during examination.

Respectfully submitted,

PILLSBURY WINTHROP LLP

A handwritten signature in black ink, appearing to read 'C. Lair', with a long horizontal stroke extending to the right.

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APPENDIX

Examiner's Initials	First Inventor	Application No.	Filing Date	Enclosed
	Liebchen	10/705,234	November 12, 2003	<input checked="" type="checkbox"/> Specification <input checked="" type="checkbox"/> Drawings <input checked="" type="checkbox"/> Other: Claims

The Examiner's initials indicates he/she has considered the cited application relative to the subject application.

DO NOT PRINT the above information on the patent which results from the subject application.



Atty. Dkt. No.	M#	Client Ref.
	307720	P-1503.020-US

**INFORMATION DISCLOSURE STATEMENT
BY APPLICANT**

Applicant: HANSEN	
Appln. No.: 10/773,397	
Filing Date: February 9, 2004	
Examiner: NOT ASSIGNED	Group Art Unit: NOT ASSIGNED

Date: May 10, 2004 Page

1

 of

1

U.S. PATENT DOCUMENTS

Examiner's Initials*	Document Number	Date MM/YYYY	Name (Family Name of First Inventor)	Class	Sub Class	Filing Date (if appropriate)
	AR 5,680,588	10/1997	Gortych et al.			
	BR 2002/0045106 A1	04/2002	Baselmans et al.			
	CR 2002/0062206 A1	05/2002	Liebchen			
	DR 2002/0152452 A1	10/2002	Socha			
	ER 2003/0082463 A1	05/2003	Laidig et al.			

FOREIGN PATENT DOCUMENTS

Document Number	Date MM/YYYY	Country	Inventor Name	English Abstract	Translation Readily Available
				Enclosed	No
				Enclose	No

OTHER (Including in this order Author, Title, Periodical Name, Date, Pertinent Pages, etc.)

FR	Burkhardt et al., "Illuminator Design for the Printing of Regular Contact Patterns," <i>Microelectronic Engineering</i> , Vol. 41, No. 42, 1998, pp. 91-96.				
GR	Chen et al., "Practical Method for Full-Chip Optical Proximity Correction," <i>SPIE</i> , Vol. 3051, 1997, pp. 790-803.				
HR	Chen et al., "Optical Proximity Correction for Intermediate-Pitch Features Using Sub-Resolution Scattering Bars," <i>Journal of Vacuum Science & Technology B</i> , Vol. 15, No. 6, Nov/Dec 1997, pp. 2426-2433.				
IR	Flagello et al., "Lithographic Lens Testing: Analysis of Measured Aerial Images, Interferometric Data and Photoresist Measurements," <i>SPIE Microlithography Seminar</i> , 1996.				
JR	Flagello et al., "Towards a Comprehensive Control of Full-Field Image Quality in Optical Photolithography," <i>SPIE Microlithography Seminar</i> , March 1997.				
KR	Gau et al., "Strategy to Manipulate the Optical Proximity Effect by Post-Exposure Bake Processing," <i>SPIE</i> , Vol. 3334, 1998, pp. 885-891.				
LR	Gau et al., "The Customized Illumination Aperture Filter for Low k1 Photolithography Process," <i>SPIE</i> , Vol. 4000, March 2000, pp. 271-282.				
MR	Hsia et al., "Customized Off-Axis Illumination Aperture Filtering for Sub-0.18 μ m KrF Lithography," <i>SPIE</i> , Vol. 3679, March 1999, pp. 427-434.				
NR	Liu et al., "The Application of Alternating Phase-Shifting Masks to 140 nm Gate Patterning: Line Width Control Improvements and Design Optimization," <i>SPIE</i> , Vol. 3236, 1998, pp. 328-337.				
OR	Smith et al., "Illumination Pupil Filtering Using Modified Quadrupole Apertures," <i>SPIE</i> , Vol. 3334, 1998, pp. 384-394.				
PR	Suzuki et al., "Multilevel Imaging System Realizing k ₁ =0.3 Lithography," <i>SPIE</i> , Vol. 3679, March 1999, pp. 396-407.				
QR	Wong et al., "Level-Specific Lithography Optimization for 1-Gb DRAM," <i>IEEE Transactions on Semiconductor Manufacturing</i> , Vol. 13, No. 1, February 2000, pp. 76-87.				

Examiner	Date Considered:
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*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.